

*Outgoing
C/007/0039 OR*

From: Steve Christensen
To: chansen@archcoal.com; OGMCOAL; Pam Grubaugh-Littig; vmiller@archcoal.com
Date: 2/25/2008 4:14 PM
Subject: Dugout Expansion (C/007/0039)
Place: OGMCOAL
Attachments: Presubsidence_Baseline Regulations.doc

CC: Angela Nance
Chris and Vicky,

This e-mail is a follow up to a phone conversation that I had with Vicky last week regarding baseline data requirements relative to Dugout's 220 acre expansion. Sorry I missed your call.

Given the significant revisions to the mine plan depicted on the Plate 5-7 that you brought in at our February 8th, 2008 meeting (with the SITLA tract removed entirely and with no proposed secondary mining within the expansion) we're allowed, and I believe justifiably so, some wiggle room in our interpretation of the pre-subsidence and baseline regulations.

However, as we work through the process and ultimately the Division signs off on the expansion (assuming that the mine plan shown on the aforementioned Plate 5-7 doesn't change), I'm going to put language in the approval letter to the effect that if long wall mining is to occur either in the SITLA tract or in Section 17 of the proposed expansion, the pre-subsidence and baseline reg's that I provided at the meeting (see Attached) are going to have to be addressed (i.e. we will require that the required cross-sections and maps of renewable resources such as aquifers, recharge areas etc.) are provided to the Division and the reason is this.

In light of the audit and the call for the Division to be consistent in how it carries out it's reviews, we have to require this information. We asked for the same information for Lyla as well as Bear Canyon. The audit is very specific in regard to Division reviewers being consistent in processing our reviews. As a result, my sense is that we will be applying the regulations (as written) across the board to everyone. In this case, the groundwater information will be required as outlined in the attached regulations if long wall mining and planned subsidence is proposed within the SITLA tract or in Section 17 of the proposed expansion.

I agree with you that these ground water systems are relatively small, localized systems. However, upon reviewing the attached regulations, the onus is on the Operator to demonstrate that (i.e. data is required). I don't believe I'd be doing my job correctly if I simply took it on faith that the ground water systems are as you say they are. In order to produce the required cross-sections and maps, a minimum of three ground water wells would need to be advanced in the area of the expansion.

As I said, I agree that these are relatively small, localized ground water systems. I do not completely agree that these systems are as small as was discussed at our February 8th meeting. Even if three ground water wells were developed in the proposed expansion area and produced zero water, at the very least you will have demonstrated that there's no ground water for you to impact.

Give me a call or send me an e-mail if you have any questions on this matter.

Thanks,
Steve

Steve Christensen

Environmental Scientist III

Utah Division of Oil, Gas and Mining
(801) 538-5350

Subsidence Control Plan:

Renewable Resource Lands definition:

30 CFR Ch. VII 701.5: Means aquifers and areas for the recharge of aquifers and other underground waters, areas for agricultural or silvicultural production of food and fiber and grazing lands.

R645-100: Means aquifers and areas for the recharge of aquifers and other underground waters, areas for agricultural or silvicultural production of food and fiber, and grazing lands. For the purposes of R645-103, RENEWABLE RESOURCE LANDS means geographic areas which contribute significantly to the long-range productivity of water supply or of food or fiber products, such lands to include aquifers and aquifer recharge areas. Note-R645-103 deals with 'areas unsuitable for coal mining'.

Pre-Subsidence Regulations:

R645-301-525.110 - A map of the permit and adjacent areas at a scale of 1:12,000, or larger if determined necessary by the Division, showing the location and type of structures and renewable resource lands that subsidence may materially damage or for which the value or reasonably foreseeable use may be diminished by subsidence, and showing the location and type of *State-appropriated water* that could be contaminated, diminished, or interrupted by subsidence.

(30 CFR Ch. VII 784.20 (a)(1)) - A map of the permit and adjacent areas at a scale of 1:12,000, or larger if determined necessary by the Division, showing the location and type of structures and renewable resource lands that subsidence may materially damage or for which the value or reasonably foreseeable use may be diminished by subsidence, and showing the location and type of *drinking, domestic, or residential water supplies* that could be contaminated, diminished, or interrupted by subsidence.

R645-301-525.120 - A narrative indicating whether subsidence, if it occurred, could cause material damage to or diminish the value or reasonable foreseeable use of such structures or renewable resource lands or could contaminate, diminish, or interrupt *State-appropriated water supplies*.

(30 CFR Ch. VII 784.20 (a)(2)) A narrative indicating whether subsidence, if it occurred, could cause material damage to or diminish the value or reasonable foreseeable use of such structures or renewable resource lands or could contaminate, diminish, or interrupt *drinking, domestic, or residential water supplies*.

R645-301-525.130 - A survey of the condition of all non-commercial buildings or occupied residential dwellings and structures related thereto, that may be materially damaged or for which the reasonable foreseeable use may be diminished by subsidence, within the area encompassed by the applicable angle of draw; as well as *a survey of the quantity and quality of all State-appropriated water supplies within the permit area and adjacent area that could be contaminated, diminished, or interrupted by subsidence*. If the applicant cannot make this survey because the owner will not allow access to the site, the applicant will notify the owner, in writing, of the effect that denial of access will have as described in R645-301-525. The applicant must pay for any technical assessment or

engineering evaluation used to determine the pre-mining conditions or value of such non-commercial buildings or occupied residential dwelling and structures related thereto and the quantity and quality of State-appropriated water supplies. The applicant must provide copies of the survey and any technical assessment or engineering evaluation to the property owner, the water conservancy district, if any, where the mine is located and to the Division.

(30 CFR Ch. VII 784.20 (a)(3)- A survey of the condition of all non-commercial buildings or occupied residential dwellings and structures related thereto, that may be materially damaged or for which the reasonable foreseeable use may be diminished by subsidence, within the area encompassed by the applicable angle of draw; as well as *a survey of the quantity and quality of drinking, domestic, or residential water supplies within the permit area and adjacent area that could be contaminated, diminished, or interrupted by subsidence.* If the applicant cannot make this survey because the owner will not allow access to the site, the applicant will notify the owner, in writing, of the effect that denial of access will have as described in R645-301-525. The applicant must pay for any technical assessment or engineering evaluation used to determine the pre-mining conditions or value of such non-commercial buildings or occupied residential dwelling and structures related thereto and the quantity and quality of State-appropriated water supplies. The applicant must provide copies of the survey and any technical assessment or engineering evaluation to the property owner, the water conservancy district, if any, where the mine is located and to the Division.

Baseline Regulations:

Adjacent Area Definition:

30 CFR Ch. VII 701.5: Means the area outside the permit area where a resource or resources, determined according to the context in which adjacent area is used, are or reasonably could be expected to be adversely impacted by proposed mining operations, including probable impacts from underground workings.

R645-100: 30 CFR Verbatim

Maps

R645-301-722- Cross-Sections and Maps. The application will include cross sections and maps showing:

R645-301-722.100- Location and extent of subsurface water, if encountered, within the proposed permit or adjacent areas. For UNDERGROUND COAL MINING AND RECLAMATION ACTIVITIES, location and extent will include, but not limited to areal and vertical distribution of aquifers, and portrayal of seasonal differences of head in different aquifers on cross-sections and contour maps; (30 CFR Ch. VII 783.25 (a)(6) verbatim)

R645-301-724.100- Ground Water Information. The location and ownership for the permit and adjacent areas of existing wells, springs and other ground-water resources, seasonal quality and quantity of ground water, and usage. Water quality descriptions will include, at a minimum, total dissolved solids or specific conductance corrected to 25 degrees C, pH, total iron and total manganese. Ground-water quantity descriptions will include, at a minimum, approximate rates of discharge or usage and depth to the water in the coal seam, and each water-bearing stratum above and potentially impacted stratum below the coal seam. (30 CFR Ch. VII 780.21 (b)(1) verbatim)

R645-301-724.200- Surface water information. The name, location, ownership and description of all surface- water bodies such as streams, lakes and impoundments, the location of any discharge into any surface-water body in the proposed permit and adjacent areas, and information on surface-water quality and quantity sufficient to demonstrate seasonal variation and water usage. Water quality descriptions will include, at a minimum, baseline information on total suspended solids, total dissolved solids or specific conductance corrected to 25 degrees C, pH, total iron and total manganese. Baseline acidity and alkalinity information will be provided if there is a potential for acid drainage from the proposed mining operation. Water quantity descriptions will include, at a minimum, baseline information on seasonal flow rates. (30 CFR Ch. VII 780.21 (b)(2) verbatim)